

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): An electrode for electric discharge surface treatment comprising a compressed mixture of at least a powder of metal carbide and a powder of ~~hydrogen-desorbed metal hydride~~ from which hydrogen is desorbed before performing an electric discharge surface treatment operation.

Claim 2 (previously presented): The electrode for electric discharge surface treatment as defined in claim 1, wherein the metal carbide is titanium carbide and the metal hydride prior to hydrogen desorption is titanium hydride.

Claim 3 (previously presented): The electrode for electric discharge surface treatment as defined in claim 1, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 4 (currently amended): A manufacturing method of an electrode for electric discharge surface treatment comprising mixing at least a powder of metal carbide and a powder of metal hydride; compression molding and desorbing hydrogen in the metal hydride before performing an electric discharge surface treatment operation; and subsequently performing heat treatment to manufacture the electrode for electric discharge surface treatment.

Claim 5 (previously presented): The manufacturing method of an electrode for electric discharge surface treatment as defined in claim 4, characterized in that the metal carbide is titanium carbide and the metal hydride is titanium hydride.

Claim 6 (previously presented): The manufacturing method of an electrode for electric discharge surface treatment as defined in claim 4, wherein a mixing ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 7 (currently amended): An electrode for electric discharge surface treatment obtained by mixing at least a powder of metal carbide and a powder of metal hydride;

compression molding the mixture and desorbing hydrogen in the metal hydride before performing an electric discharge surface treatment operation; and

subsequently performing heat treatment to manufacture the electrode for electric discharge surface treatment.

Claim 8 (previously presented): The electrode for electric discharge surface treatment as defined in claim 7, wherein the metal carbide is titanium carbide and the metal hydride is titanium hydride.

Claim 9 (previously presented): The electrode for electric discharge surface treatment as defined in claim 7, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 10 (currently amended): A method for discharge surface treating a work using an electrical discharge machine comprising positioning an electrode comprising a compressed mixture of at least a powder of metal carbide and a powder of ~~a hydrogen-desorbed metal hydride~~ from which hydrogen is desorbed before performing an electric discharge surface treatment operation opposite a material to be surface treated; and

forming a coating on the material by causing electrical discharge between the electrode and the material.

Claim 11 (previously presented): The method as defined in claim 10, wherein the metal carbide is titanium carbide and the metal hydride is titanium hydride.

Claim 12 (previously presented): The method as defined in claim 10, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 13 (previously presented): The electrode for electric discharge surface treatment as defined in claim 3, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 14 (previously presented): The electrode for electric discharge surface treatment as defined in claim 6, wherein the mixing ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 15 (previously presented): The electrode for electric discharge surface treatment as defined in claim 9, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 16 (previously presented): The electrode for electric discharge surface treatment as defined in claim 12, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.

Claim 17 (new): A manufacturing method of an electrode for electric discharge surface treatment comprising steps of;

 mixing at least a powder of metal carbide and a powder of metal hydride;
 performing compression molding of the mixture of the powders to form the electrode;
and subsequently
 desorbing hydrogen from the hydride so as to manufacture the electrode comprising metal carbide and metal for electric discharge surface treatment.

Claim 18 (new): The manufacturing method of an electrode for electric discharge surface treatment as defined in claim 17, wherein the metal carbide is titanium carbide and metal hydride is titanium hydride.

Claim 19. (new): The manufacturing method of an electrode for electric discharge surface treatment as defined in claim 17, wherein a mixing ratio of the powder of the metal carbide to the powder of the metal hydride is set according to desired electrode strength and crumbliness.

Claim 20. (new): The manufacturing method of an electrode for electric discharge surface treatment as defined in claim 19, wherein the ratio of the powder of the metal carbide to the powder of the metal hydride is 1:9 to 9:1.